

and a second configuration having a second shape such that the elongate body is adapted to exert a force from within the vessel onto the extravascular tissue structure in order to remodel the extravascular tissue structure.

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22 (New). A medical device as in Claim 21, wherein the elongate body is adapted to be positioned in the first configuration at least in part within a coronary sinus and is adapted to remodel a mitral valve annulus adjacent to the coronary sinus when the elongate body is located at least in part within the coronary sinus and is adjusted to the second configuration.

23 (New). A medical device as in Claim 22, wherein the elongate body is adapted to be permanently implanted in the patient at least in part within the coronary sinus in the second configuration in order to provide chronic remodeling of the mitral valve annulus.

24 (New). A medical device as in Claim 22, wherein the elongate body is selectively adjustable between the first and second configurations while the elongate body is located at least in part within the coronary sinus, and is adapted to be temporarily implanted at least in part within the coronary sinus in the second configuration for temporary

remodeling of the mitral valve annulus and to be thereafter removed from the coronary sinus in the first configuration.

25 (New). A medical device as in Claim 22, wherein the elongate body within the coronary sinus comprises a substantially similar length between the first and second configurations.

a1 26 (New). A medical device as in Claim 22, wherein the elongate body within the coronary sinus is relatively non-expandable while the elongate body is adjusted between the first and second configurations.

27 (New). A medical device as in Claim 22, wherein the elongate body within the coronary sinus is relatively non-compressible while the elongate body is adjusted between the first and second configurations.

~~28 (New). A medical device as in Claim 22, wherein the elongate body has a length between the proximal and distal ends that is less than about 10cm.~~

29 (New). A medical device as in Claim 22, further comprising a lock for retaining the elongate body in the second configuration at least in part within the coronary sinus.

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30 (New). A medical device as in Claim 22, wherein in the second configuration the second shape for the elongate body at least within the coronary sinus defines an arc.

31 (New). A medical device as in Claim 30, wherein a best fit constant radius curve corresponding to the arc has a radius within the range of from about 10 mm to about 20 mm.

a1 32 (New). A medical device as in Claim 22, further comprising an anchor for retaining the elongate body at least in part within the coronary sinus.

33 (New). A medical device as in Claim 32, wherein the anchor comprises a region along a distal portion of the elongate body.

34 (New). A medical device as in Claim 32, wherein the anchor comprises a friction enhancing surface for engaging a wall of the coronary sinus.

35 (New). A medical device as in Claim 32, wherein the anchor comprises at least one barb for piercing a wall of the coronary sinus.

36 (New). A medical device as in Claim 32, wherein the anchor is located at least in part at the proximal end of the elongate body.

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37 (New). A medical device as in Claim 21, wherein the adjacent tissue structure has a wall that circumscribes a space having a diameter, and the elongate body when adjusted from the first configuration to the second configuration within the body space is adapted to compress the adjacent tissue structure to thereby reduce its diameter.

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38 (New). A medical device as in Claim 22, further comprising:

a deployment system cooperating with the elongate body and which is adapted to at least in part deliver the elongate body in the first configuration at least in part into the coronary sinus.

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39 (New). A medical device as in claim 38, wherein the deployment system comprises a delivery member that is coupled to the elongate body and is adapted to advance the elongated body into the coronary sinus.

40 (New). A medical device for remodeling a tissue structure adjacent to a body space that is defined at least in part by a tissue wall in a patient, comprising:

an elongate body extending between a proximal end portion and a distal end portion and that is adjustable between a first configuration having a first shape that is adapted to be delivered at least in part into the body space

and a second configuration having a second shape that is adapted at least in part to exert a force from within the body space onto the adjacent tissue structure in order to remodel the adjacent tissue structure.

41 (New). A method for providing a medical device for use in treating a patient from within a vein that is associated with the patient's heart, comprising:

a1 providing an array of medical devices, each medical device having an elongate body that is adjustable in-situ from a first configuration having a first shape to a second configuration having a second shape, and each elongate body of each medical device of the array being constructed to have a unique size relative to the elongate bodies of the other medical devices of the array; and

choosing the medical device from the array at least in part based upon a known measurement for a vein that is associated with the patient's heart,

wherein the elongate body of the chosen medical device is adapted to be delivered in the first configuration into the vein and is adjustable within the vein from the first configuration to the second configuration such that the unique size is appropriate in order to remodel the mitral valve annulus from within the vein.

42 (New). The method of Claim 41, further comprising choosing the medical device at least in part based upon comparing the measurement for the vein with the unique size of the elongate body.

43 (New). The method of Claim 41, wherein the medical device is chosen at least in part based upon a known measurement for a coronary sinus.

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44 (New). The method of Claim 41, wherein the vein has a central axis, and the known measurement comprises at least one of a length of at least a portion of the vein, a radius of curvature of the vein along the central axis, and a diameter of the vein across the central axis.

45 (New). The method of Claim 41, further comprising:

providing the array of medical devices such that the elongated bodies have a graduated array of respective sizes.

46 (New). A method for providing a medical device for use in treating a patient comprising:

providing an array of medical devices, each medical device having an elongate body that is adjustable in-situ from a first configuration having a first shape to a second configuration having a second shape, and each elongate body of

each medical device of the array being constructed to have a unique geometry relative to the elongate bodies of the other medical devices; and

a1 choosing the medical device from the array at least in part based upon a known measurement for a parameter associated with at least one of (i) a valve associated with the patient's heart, and (ii) a vessel associated with the patient's heart,

wherein the elongate body of the chosen medical device is adapted to be delivered in the first configuration into the vessel and is adjustable within the vessel from the first configuration to the second configuration such that the unique geometry is appropriate in order to remodel the valve from within the vessel.

47 (New). The method of Claim 46, further comprising:

choosing the medical device from the array at least in part based upon a known measurement for a geometric parameter associated with at least one of the mitral valve and the coronary sinus.

48 (New). The method of Claim 47, further comprising choosing the medical device at least in part based

upon a known measurement for a geometric parameter associated with the coronary sinus.

al 49 (New). The method of Claim 48, wherein the coronary sinus has a central axis and the geometric parameter comprises at least one of: a length of at least a portion of the coronary sinus, a radius of curvature of the coronary sinus along the central axis, and a diameter of the coronary sinus across the central axis.

50 (New). The method of Claim 46, further comprising choosing the medical device at least in part based upon a known measurement for a geometric parameter associated with the mitral valve.

51 (New). The method of Claim 50, wherein the geometric parameter is associated with a mitral valve annulus of the mitral valve.

52 (New). The method of Claim 49, wherein the geometric parameter comprises a diameter of the mitral valve annulus.

53 (New). A method of reducing mitral annulus diameter, comprising:

transluminally advancing a prosthesis into the coronary sinus; and



deploying at least a portion of the prosthesis within the coronary sinus to restrain expansion of the mitral annulus.

54 (New). A method of reducing mitral annulus diameter as in Claim 53, further comprising the step of percutaneously accessing the venous system prior to the transluminally advancing step.

a1 55 (New). A method of reducing mitral annulus diameter as in Claim 54, wherein the accessing step is accomplished by accessing one of the internal jugular, subclavian and femoral veins.

56 (New). A method of reducing mitral annulus diameter as in Claim 53, further comprising the step of advancing the prosthesis from a first configuration to a second configuration to reduce the diameter of the mitral annulus.

57 (New). A method of reducing mitral annulus diameter as in Claim 53, further comprising the step of limiting diastolic expansion of the left ventricle.

58 (New). A method of reducing mitral valve annulus diameter as in claim 53, wherein the transluminally advancing step is accomplished using a catheter.

59 (New). A method of performing transluminal mitral annuloplasty, comprising:

providing a catheter, having a proximal end and a distal end and a prosthesis therein;

inserting the catheter into the venous system such that the distal end of the catheter is proximate the coronary sinus;

a1 transluminally advancing the prosthesis into the coronary sinus; and

deploying the prosthesis to influence the size of the mitral valve annulus.

60 (New). A method of performing transluminal mitral annuloplasty as in Claim 59, further comprising the step of causing the prosthesis to exert a compressive force on the adjacent atrial musculature.

61 (New). A method of performing transluminal mitral annuloplasty as in Claim 60, wherein the compressive force is generated by a bias in the prosthesis.

62 (New). A method of performing transluminal mitral annuloplasty as in Claim 60, wherein the compressive force is generated by tightening the prosthesis around the mitral valve annulus following the transluminally advancing step.

63 (New). A method of performing transluminal mitral annuloplasty as in Claim 62, wherein the tightening step is accomplished by axial movement of a tightening element within the prosthesis.

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64 (New). A method of providing a therapeutic compressive force against a tissue structure which is adjacent to a vessel wall, comprising positioning a device in the vessel and exerting a force against the wall of the vessel to exert a force against the tissue structure.

65 (New). A method as in Claim 64, wherein the positioning is accomplished percutaneously.

66 (New). A method as in Claim 64, wherein the tissue structure comprises the mitral valve annulus.

67 (New). A method as in Claim 64, wherein the tissue structure comprises the left ventricle.

68 (New). A method as in Claim 64, further comprising deploying the device within the vessel.

69 (New). A method as in Claim 64, wherein the vessel comprises a vein.

70 (New). A method of performing annuloplasty of the mitral valve comprising positioning a prosthesis in the coronary sinus.

71 (New). A method of limiting diastolic expansion of the left ventricle, comprising positioning a prosthesis in a coronary vein.

al 72 (New). A method of reducing mitral annulus diameter as in Claim 53, further comprising the step of monitoring the degree of mitral regurgitation.

73. (New) A transluminally implanted device for limiting diastolic expansion of the left ventricle comprising:  
an elongate body having a proximal end and a distal end;

a first attachment site proximate the distal end of the elongate body, and a second attachment site proximate the proximal end of the elongate body; and

means for securing the first attachment site and the second attachment site together.

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C9 74 (New). A medical device as in claim 39, wherein the elongated body is pre-formed into an arcuate shape in the second configuration such that when advanced by a delivery member into the coronary sinus it assumes its pre-formed